



## PATENT ABSTRACTS OF JAPAN

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(71) Applicant:

**FUJITSU LTD**

(72) Inventor:

**IWAMA TAKEO  
MASUKO TAKAYUKI****(54) OPERATION STABILIZING METHOD FOR  
WAVEGUIDE TYPE OPTICAL MODULATOR****(57) Abstract:**

**PURPOSE:** To prevent the deterioration of an extinction ratio caused by a temperature variation, a secular change, etc. by detecting the extinction ratio by receiving a part of an outputted intensity modulation light beam by a light receiver, and controlling a voltage applied between electrodes so that the extinction ratio becomes maximum.

**CONSTITUTION:** An extinction ration is detected by receiving a part of an outputted intensity modulation light beam by a light receiver 21, and a voltage applied between electrodes 17, 18 is controlled so that the extinction ratio becomes maximum. That is, a light receiving signal of the receiver 21 is amplified by an amplifier 22, and inputted to a waveform observing device 23 such as an oscilloscope, etc. A control circuit 24 for controlling a driving circuit 25 so that an extraction ratio of a detected output light becomes maximum is provided. The driving circuit 25 sets the voltage applied to the electrodes 17, 18 in accordance with an inputted digital modulating signal, and also, adjusts an operation point in an operation characteristic curve in accordance with a control signal from the control circuit 24. That is, the reference potential is adjusted to a voltage for applying the

maximum or the minimum output light intensity. In such a way, the deterioration of the extinction ratio caused by a temperature variation, etc. is prevented and the operation of an optical modulator can be stabilized.

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